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U.S. SMALL BUSINESS ADMINISTRATION  
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FEDERAL COMMUNICATIONS COMMISSION  
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BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554

ORIGINAL  
FILE

In the Matter of

Amendment of the Commission's  
Rules to Establish New Personal  
Communications Services

) Gen Docket No. 90-314  
) ET Docket No. 92-100  
)  
) RM-7140, RM-7175, RM-7617  
) RM-7618, RM-7760, RM-7782  
) RM-7860, RM-7977, RM-7978  
) RM-7979, RM-7980  
)  
) PP-35 through PP-40, PP-79  
) through PP-85

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Comments of the Chief Counsel for Advocacy  
of the United States Small Business Administration  
on the Notice of Proposed Rulemaking

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November 9, 1992

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*I. Communications Technology -- A Brief History*

Eighteen-sixty-four: the modern communications revolution begins when an obscure British physicist, James Clerk Maxwell, develops a theory of electromagnetic waves. Within a short period of time, his theory is exploited to develop new communication technologies: on March 10, 1876, Alexander Graham Bell ushers in the world of telephones with the now celebrated phrase, "Mr. Watson -- come here, I want you!" In 1896, Guglielmo Marconi invents a means of transmitting sound without the use of cables -- radio; in 1930, Philo Farnsworth invents an electronic means of scanning images and delivering them without the use of wires -- television is born.

By the beginning of the Roosevelt administration in 1933, telephones and radio were fairly common devices to the American public, and television, though still in its infancy, was no longer a far-fetched idea. These technologies and what they promised for the future were reason enough for Congress to enact the Federal Communications Act of 1934, 47 U.S.C. §§ 151-609 (Act). Congress expected regulation of wireline communications and government allocation of spectrum to provide to all Americans a "rapid, efficient, nationwide, and worldwide wire and radio communication service with adequate facilities at reasonable charges." *Id.* at § 151.

Very soon, dreams became reality. With the Soviet launch of the Sputnik satellite in 1957 came the world's introduction to the use of satellites for transmission of telephone, radio, and television signals. The quest to conquer the "final frontier" brought significant advances in microelectronics, first with the development of the semiconductor, then the integrated circuit, and finally, the silicon chip. Computers, which had been the stuff of science fiction and dreamers, are now commonplace on the desks of workers.

These advances also enabled the telephone to be divorced from its wire anchor. Whether it is a cordless telephone moving from room to backyard in a residence or a cellular telephone

riding in a car, telephone communication has become portable.<sup>1</sup>  
Yet, this revolution is not over.

Personal communication services (PCS) represent the next step in the evolution of telecommunications technology. PCS constitutes the melding of wireless radio transmission with the concept of telephonic interaction. Individuals will not be tied to a device with a telephone number; rather, telephone users will have the same number irrespective of where they are or what device they use to communicate. Nearly seamless communication will occur with devices no larger than the medallions on Star Trek: The Next Generation. Conventional wireline telephone service will seem as antiquated as the ENIAC computer.

## II. *The Current Proceeding*

The dreams and ambitions of scientists and entrepreneurs are tempered by one of Mr. Maxwell's undeniable laws -- the amount of electromagnetic spectrum capable of carrying messages is limited. To further complicate matters, the Federal Communications Commission (FCC or Commission), pursuant to its authority under the Act, already allocates large portions of the spectrum for

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<sup>1</sup> A cellular system resembles a honeycomb in which each cell is served by a low-power transmitter. While traveling, the mobile user moves from cell to cell. This movement is detected by a mobile telephone switching office and transfers the call to the adjacent cell. NORTH AMERICAN TELECOMMUNICATIONS ASSOCIATION, INDUSTRY BASICS 25 (1991) (Industry Basics).

specific uses.<sup>2</sup> For PCS to develop, the FCC must reallocate spectrum from current users, license the new users, and ensure that new users meet appropriate operational standards. To accomplish this task, the Commission initiated two related rulemakings.

One rulemaking reallocates spectrum from certain current users to new PCS technologies. In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9 (September 4, 1992) (Spectrum Reallocation). The second rulemaking, the one at issue in these comments, In the Matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, Gen. Docket No. 90-134 (August 14, 1992) (NPRM) proposes to develop an appropriate regulatory structure for licensing of PCS providers.

The Commission, through this rulemaking, wants to find a regulatory regime that will generate universal availability of PCS, speed its deployment, provide a diversity of service, and ensure a competitive marketplace. NPRM at ¶ 6. The FCC believes that the options expatiated in the notice will satisfy these criteria given the amount of spectrum to be made available in the Spectrum Allocation Proceeding.

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<sup>2</sup> In the alternative, technological advance may permit users to share spectrum. This will not obviate the need for FCC licensure of all those sharing the same spectrum.

Pursuant to the Regulatory Flexibility Act, 5 U.S.C. §§ 601-12, the Commission prepared an initial regulatory flexibility analysis. The FCC determined that the proposal may provide new opportunities to small businesses in telecommunications but could not quantify the potential benefits to small businesses. NPRM at ¶ 165.

The Office of Advocacy commends the Commission for recognizing the potential beneficial effects that this rulemaking will have on small businesses involved in wireless telecommunications. The Office of Advocacy also notes that the advent of PCS will benefit small business users of telecommunication services. As a result, the Office of Advocacy strongly supports the development of PCS and endorses the goals set forth by the Commission. We believe that a fully competitive environment in which a minimum of five licensees, irrespective of their current status as cellular or local exchange carriers, can provide service will be the best method for achieving the goals of the Commission.

### *III. Current Status of the PCS Industry*

The Commission has issued over 150 experimental licenses to develop and test equipment and services using a variety of technologies. While the industry is in its infancy, many analysts estimate that PCS has the potential to attract some 60

million customers -- a three hundred percent increase over the current level of usage for wireless communication services.<sup>3</sup>

The PCS industry constitutes a number of different services. The most anticipated service is denoted Personal Communications Network or PCN.<sup>4</sup> The service resembles the current cellular system with radio base stations and portable telephones. However, the PCN will use many more cells (microcells) which will enable smaller portable telephones used to be utilized due to the low power requirements needed to reach a base station located in a cell.<sup>5</sup> PCNs will allow callers to enjoy continuous-call capability between any two cells. Due to the low-power and ubiquity anticipated by microcells, most analysts expect that PCNs will permit linkage of telephone to a person rather than a place. Industry Basics at 26. PCNs, because they are self-contained, will permit users to bypass entirely the current telephone network. This process will be aided significantly by the digitalization of voice signals so that the electromagnetic

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<sup>3</sup> The cellular telephone industry has 10 million customers with gross revenue of 7 billion dollars. The other primary wireless communication service -- paging -- has over 11 million customers with revenue in excess of 3 billion dollars.

<sup>4</sup> A number of experimental licenses have been issued for test of PCN. The majority have been issued to cable companies because their ubiquity and the carrying capacity of their coaxial cables provide excellent base points for microcells.

<sup>5</sup> The microcells may be located on every floor of an office building while cells for current cellular telephone service may be located a mile apart.

spectrum can be utilized in the most efficient manner possible.<sup>6</sup>

*Id.* However, most analysts anticipate that PCNs will, at some point, be linked to the current telephone network. *Id.*

Other types of PCS are based on the construction of cells but adapt current cordless telephone technology. CT-2 (cordless telephone second generation) uses a digitalized voice signal that permits the cordless telephone receiver to operate as the initiator of telephone calls and receive paging messages. CT-3 (cordless telephone third generation) will permit cordless telephone receivers to receive calls as well as initiate them. CT-2 technology is being tested in Great Britain. Some analysts expect PCS to permit the development of wireless private branch exchanges (PBXs)<sup>7</sup> and allow for a wireless local loop between the central office of the local exchange carrier (LEC) and a telephone customer. Finally, certain types of PCS will enable multiple paging systems to offer national and regional service without the establishment of microcells.

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<sup>6</sup> Digitalization also will permit PCNs to transmit data as well voice signals.

<sup>7</sup> A private branch exchange is customer premise version of a local exchange carrier's central office switch. The PBX provides a dial tone, signalling, and call routing. Internal dialing routes calls to the appropriate extension while dialing "9" routes calls to an available line from the local exchange carrier's central office. These central office lines are usually grouped and called trunks. All of this is controlled by sophisticated computer software. Industry Basics at 35, 38.



Of the approximately 150 experimental licenses issued for various PCS testing, almost all have been on frequencies in the 900 MHz or 2 GHz bands. The Commission and industry expect that the 900 MHz band will be utilized for paging services including CT-2. NPRM at ¶¶ 48-49. Almost all other PCS services, such as PCN and CT-3, will utilize, at least for the foreseeable future, the 2 GHz band.<sup>8</sup> *Id.* at ¶¶ 32-33.

The major dilemma facing the expansion of wireless communication is the fact that the two bands assigned by the Commission for PCS development already have users on the spectrum. Paging services currently occupy significant portions of the 900 MHz band. Of even greater consequence is the use of the 2 GHz band by private operational-fixed microwave services.<sup>9</sup>

To alleviate this problem, the Commission must reallocate sufficient spectrum to permit the growth of PCS. However, the

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<sup>8</sup> There have been a number of bills introduced over the past two years to reallocate spectrum dedicated to federal use for private commercial use. This legislation has been blocked by a philosophical dispute among Congressional leaders and the Bush Administration concerning the use of auctions to conduct the reallocation. If such reallocation ever occurs, it will reduce significantly congestion on the 900 MHz and 2 GHz bands.

<sup>9</sup> These facilities are used to provide special industrial radio service to commercial businesses regularly engaged in the construction or operation of roads, bridges, sewer systems, pipelines, airfields, water, oil, or gas collection or distribution systems. 47 C.F.R. § 90.73. Another part of the 2 GHz band provides operational-fixed microwave service to railroads.

current users of reallocated spectrum want assurances that their interests are not harmed.

#### IV. *Spectrum Allocation Issues*

The Commission deals with the actual reallocation of spectrum and whether it is in the public interest in the Spectrum Reallocation docket.<sup>10</sup> However, assuming that the Commission undertakes these reallocations, a number of spectrum management issues are addressed separately in this proceeding.

##### A. Number of Providers

The Office of Advocacy strongly supports the Commission's goal of a fully competitive marketplace for PCS. Given the laws of physics and the limited amount of spectrum available, the classic free-market approach of unlimited entry is impossible. Therefore, the Commission, pursuant to its authority under the Act, has both the power and mandate to allocate spectrum among various interests in a given region.<sup>11</sup>

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<sup>10</sup> The Office of Advocacy fully expects to participate in that proceeding.

<sup>11</sup> The courts are consentient that the FCC has substantial discretion in allocating spectrum and licensing users. *Aeronautical Radio, Inc. v. FCC*, 928 F.2d 428, 445 (D.C. Cir. 1991); *Wheeling Antenna Co. v. United States*, 391 F.2d 179, 181 (4th Cir. 1968).

The determination of the number of PCS providers in a particular area must balance two factors: efficiencies gained from limiting the number of licensees and the need for competitive balance. The Office of Advocacy believes that technological advances, such as more efficient use of spectrum, will enable the FCC to give greater weight to competitive balance in determining the number of licensees in a particular region.<sup>12</sup>

The Commission tentatively decides that a minimum of three service providers per licensing area will be necessary to "ensure a wide and rich range of PCS services ... at reasonable prices." *Id.* at ¶ 34. The Office of Advocacy agrees with the basic tenet behind the tentative decision but believes that even more PCS providers must be permitted in each licensing area. The Office of Advocacy, after discussion with various mobile communication providers, understands that five providers can operate within the current spectrum confines contemplated by the Commission. Given this fact, the Office of Advocacy recommends that the FCC permit at least five service providers in each area.

The Office of Advocacy's proposal has a number of benefits. First, it ensures a sufficient number of entrants to provide a

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<sup>12</sup> The Commission's experience with cellular telephone service must militate against limiting entry to two or even three licensees. The General Accounting Office recently noted that the duopolistic nature of the cellular telephone industry has not led to competitive prices. GENERAL ACCOUNTING OFFICE, CONCERNS ABOUT COMPETITION IN THE CELLULAR TELEPHONE INDUSTRY 2, 4 (1992).

freely competitive market. In turn, this will keep prices low and consumer and small business utilization of PCS high. Second, it maximizes, within current technological capabilities, the opportunity for small businesses to participate as a provider of PCS.<sup>13</sup> Third, it will ensure that current cellular telephone providers cannot dominate the provision of mobile services. This will allow the Commission to permit current cellular telephone providers to offer PCS. Fourth, a substantial number of multiple entrants will ensure rapid deployment of as complete a PCS network as possible. No one licensee will wish to watch its competitors capture large segments of the market. For these reasons, the Office of Advocacy opines that permitting at least five entrants will be in the public interest.

#### B. Spectrum Blocks

Once the number of licensees is determined, the FCC must award them sufficient amounts of spectrum within the 2 GHz band to provide adequate service. Each current cellular telephone operator is allocated 25 MHz of spectrum within the combined 824-849 MHz and 869-894 MHz bands. The Commission believes that PCS licensees should be awarded "a comparable amount of spectrum"

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<sup>13</sup> The Commission has formed a Small Business Advisory Committee whose purpose is to provide expert advice and guidance on, among other things, increasing small business participation in new communication technologies. Thus, more providers will meet this objective of the FCC.

within the 2 GHz band. *Id.* at ¶ 35. Furthermore, the FCC notes that the exact amount of available block per licensees will depend upon the outcome of the other proceedings, particularly the Spectrum Reallocation Docket, and the total number of licensees. Blocks of spectrum larger than 25 MHz will provide greater capacity to each licensee but limit the number of licensees while blocks less than 25 MHz will permit more licensees but provide each licensee with less capacity. The Commission concludes that one solution is for the issuance of 30 MHz blocks. *Id.* at ¶ 37.

The Office of Advocacy believes that competition is of paramount importance in this proceeding. Thus, the Office of Advocacy supports a reduction in spectrum blocks from the Commission's proposal of 30 MHz to 20 MHz. This will permit five licensees in each licensing area. The Office of Advocacy opines that the benefits of increased competition and lower prices will outweigh the costs associated with less capacity and reduced flexibility.<sup>14</sup>

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<sup>14</sup> This may mean that a user of PCS may have to contact more than one provider of service to satisfy all of its wireless communication services. However, the Office of Advocacy notes that a similar situation exists within the current mix of wired and wireless common carriage services. The Office of Advocacy suspects that most users of such services would be willing to incur minor inconveniences for assurances of competition and lower prices.

To the extent that certain markets do not attract the attention of five PCS providers, such as those in rural areas,<sup>15</sup> the Commission can reallocate spectrum to fewer PCS licensees. The greater spectrum capacity and efficiency available under this regulatory regime may entice PCS providers who otherwise might not venture into rural areas. This will ensure that rural Americans are not excluded from the next telecommunications revolution.<sup>16</sup>

### C. Unlicensed Devices

Part 15 of the Commission's rules permit the use of certain devices that emit electromagnetic radiation without the need to obtain an FCC license.<sup>17</sup> In prior comments in this docket, some parties requested that the FCC amend its regulations to allow for the unlicensed use of some PCS devices. Many operational-fixed microwave licensees object and worry that unlicensed use of PCS devices may interfere with activities related to their operations.

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<sup>15</sup> Microcell development in rural areas will be relatively costly for the same reasons that LECs in those areas have high non-traffic sensitive costs.

<sup>16</sup> Distinctions in allocation of spectrum between urban and rural PCS providers is no different than the divergent licensing arrangements that exist between cellular telephone service in rural and urban markets. The Office of Advocacy opines that the Commission has sufficient authority under the Act to adopt this differential assignment of spectrum.

<sup>17</sup> Such devices include CB radios and converter boxes used by cable systems.

The Commission tentatively decides that amendment of its regulations to permit the use of unlicensed PCS device in certain portions of the 2 GHz band is in the public interest. *Id.* at ¶¶ 42-43. The FCC also notes that sufficient protections can be established to ensure non-interference with current licensees.

The Office of Advocacy strongly endorses the proposal to amend Part 15. This will act as a spur to the development of new technology, lower prices for such devices, and speed consumer acceptance. Furthermore, to the extent that the amendment to Part 15 may create some interference problems for current licensees in the 2 GHz band, they tend to be utilities and railroads which can obtain reimbursement of operational costs through the regulatory process.<sup>18</sup>

#### D. 900 MHz Allocation

The Commission faces somewhat the same questions with respect to spectrum allocation in the 900 MHz that it does with respect to the 2 GHz band. In other words, the FCC must balance engineering efficiencies against competitive balance while accommodating current users. *Id.* at ¶¶ 48-52. Unlike the 2 GHz

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<sup>18</sup> The Office of Advocacy expects to address the issue of negotiations for movement of current licensees in its comments in the Spectrum Reallocation proceeding.

band, the current licensees in the 900 MHz band are likely to be the licensees for any new PCS in that band.

The dilemma faced by paging companies in determining whether to recommend larger or smaller blocks of spectrum depends on the type of paging device used by a customer. In addition, different types of services may require different types of technology. Thus, lower cost paging devices may require a larger aggregation of spectrum block than higher cost paging devices. Similarly, more sophisticated types of service may require larger aggregations of spectrum. The determination of the type of service and paging devices adopted by users will be determined in the marketplace based on cost, coverage, and available alternatives from other PCS operators. Thus, no a priori determination can be made concerning whether to have larger blocks with two paired channels or smaller blocks with four paired channels.

The Office of Advocacy suggests that the Commission allow the marketplace to determine the appropriate allocation. The Office of Advocacy suggests that this may vary from market to market and depend upon the penetration of other PCS services. While this remains a less than ideal solution, the Commission can always revisit this issue after some development has taken place in the advanced paging market. The Office of Advocacy recommends that the Commission closely study the market experiences of



experimental licensees and the pioneer preference issued to Mtel, *id.* at ¶¶ 149-51, for more information on consumer demand for enhanced services in the 900 MHz band.

#### *V. Licensing Issues*

Waves of the electromagnetic spectrum can travel unlimited distances. For example, radio emissions from quasars may travel hundreds of millions of light years before reaching a receiving antenna on Earth. Yet, even these eonian travellers lose a significant portion of their strength hurtling through the vacuum of space. In fact, the size of the antenna needed to receive these signals can take up an entire mountaintop in Arecibo, Puerto Rico. Such antennae are not particularly helpful in providing the daily telecommunication needs of a densely populated country. The Aesopian end of this tale is that the effective utility of radio communications is related to the distance the radio wave must travel. The FCC also must determine the relative size of the licensing area taking into account technology and competitive entry.

##### **A. Size of Licensing Area -- 2GHz Band**

The FCC notes that two distinct interests are involved in calculating the size of the service area. First, there may be economies of scale in the provision of PCS similar to those in

current cellular telephone service. By initially granting larger license areas to take advantage of such scale, the Commission hopes to avoid the costly consolidation that has taken place in the cellular telephone industry. *Id.* at ¶ 58. On the other hand, the Commission also understands that smaller service areas may permit broader participation by more diverse and technologically advanced providers. *Id.* at ¶ 59.

The Commission provides four different options for the size of licensing areas for the 2 GHz band. One option adopts the 487 basic trading areas as defined by most commercial atlases and marketing guides. Another limits licensing to 47 areas by aggregating many of the aforementioned basic trading areas. The third option defines the licensing area as coextensive with each one of the 194 local access transport areas developed pursuant to the modified final judgement in *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd sub. nom.*, *Maryland v. United States*, 460 U.S. 1001 (1983). The final option constitutes the maximization of scale and scope through the issuance of nationwide licenses.<sup>19</sup> NPRM at ¶ 60.

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<sup>19</sup> Although not stated, this option only permits as many licensees as determined by the Commission's allocation of spectrum blocks. This licensing regime may result in as few as two but as many as five licensees for the entire nation.

The Office of Advocacy opposes any scheme which dramatically limits the number of licensing areas or potential licensees. While the Office of Advocacy recognizes the potential for economies of scale and scope, these scale economies must not be permitted to overshadow the substantial benefits generated by a variety of competitors in diverse markets. The most significant advantage of smaller markets is that PCS providers can adapt their offerings to meet the demands of each market, which is extremely helpful to small business customers, rather than force customers to adapt their needs to a nationally or regionally homogenized PCS.<sup>20</sup>

Therefore, the Office of Advocacy supports the development of licensing areas smaller than either a national or regional basis. However, the Office of Advocacy believes that the Commission must consider a fifth option with respect to licensing areas -- mirroring the current cellular geographic service areas. This alternative varies the size of the licensing area depending upon the exigencies of the marketplace. At the same time, entrants into the PCS can use current market conditions for mobile communications to calculate the potential of each market and the type of service necessary. To the extent that some

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<sup>20</sup> The reach of each system will be expanded not by the size of the PCS operator but by the PCS interconnection with the public switched telephone network. Thus, a regional or smaller PCS provider, like a regional facility-based interexchange carrier, will be able to transfer communications anywhere in the United States.

current cellular license areas may not be appropriate for proper development and coordination of PCS, the Commission can modify those particular areas. The Office of Advocacy strongly believes that the FCC, rather than replacing the current tires, only may need to rotate them to meet their PCS objectives.

#### B. Size of Licensing Area -- 900 MHz Band

The Commission notes that the same considerations apply to the calculation of license area size for this band as are used to calculate size within the 2 GHz band. Thus, the FCC requests comments on the same options that they proffer for the 2 GHz band. The Office of Advocacy does not dispute the applicability of these considerations to licensing in this band. However, the markets for PCS are very different than those for advanced paging; they require different solutions.

Various sectors of the service economy are the largest users of paging services. People in these sectors often travel and need to have very lightweight and low-cost means of staying in contact with their home offices. Thus, many customers want national and regional coverage for their paging services and paging companies want to supply such service.

A substantial number of licensing areas will not improve the reach of advanced paging systems. This militates against

applying Advocacy's proposal for the 2 GHz band to the 900 MHz band. Rather, the Office of Advocacy recommends some form of national and regional licensing. The Office of Advocacy believes that the Commission's option concerning agglomeration of small basic trading areas into larger one may be the most beneficial means of establishing licensing areas in this band. However, the Office of Advocacy is not wedded to the 47 areas suggested by the Commission and we recommend that the FCC examine a variety of different size alternatives that accomplish the goal of providing regional and national coverage in an efficacious manner.

The Office of Advocacy has fewer concerns about limiting the number of markets in this band than in the 2 GHz band. First and foremost, most advance paging systems will not be built on the microcell model with probable interconnection to the public switched network; paging systems will not utilize cell technology to follow customers. Advanced paging then must rely on another means to get that same geographic coverage offered by PCS and its eventual interconnection into the public switched network. The provision of national and regional coverage will enhance the competitive nature of paging in the new PCS environment. Second, the number of available channels in each market and the lack of microcells will ensure that a sufficiently large number of participants can be licensed. This mitigates any potential adverse competitive consequences that might arise from national or regional licensing. Finally, by providing more efficient

national and regional coverage, the cost of such service is reduced. This further enhances the competitive capability of paging services in the new PCS environment.

### C. Eligibility for PCS Licenses

Given the current state of the market for mobile cellular and wire-based telephone communication, the Commission is quite chary about letting these monopolies and duopolies into new markets. *Id.* at ¶¶ 63-66, 71-73. In particular, the FCC is concerned that these companies will, consciously or unconsciously, repress competition and slow the development of services that may be direct competitors. The FCC seeks comment on what restrictions if any must be imposed on current cellular and wireline telephone companies to ensure a competitive marketplace.

The Office of Advocacy understands the Commission's wariness in allowing current wireline and wireless communication companies into the PCS market. Normally, the Office of Advocacy would support substantial restrictions on these companies for the reasons specified by the FCC. However, the Office of Advocacy is convinced that the potential benefits outweigh the risk of reduced competition.

First, current mobile communication providers understand the technology and have the basic infrastructure needed to adapt to the PCS market. The Office of Advocacy does not believe that the technical abilities of these companies should be set aside due to fears of decreased competition. A better means to protect competition is to ensure that sufficient spectrum is made available to as large a group of providers as technically possible.

Second, the LEC may be the only party interested in providing the infrastructure, such as microcells, needed for PCS in rural areas. The Office of Advocacy has a firm position, taken in many proceedings before the Commission and the National Telecommunication and Information Administration, that rural areas must not be excluded by government policy from the evolution and revolution occurring in telecommunications. Debarment of LECs from providing PCS may doom rural areas to second-class status in the wireless communication revolution.

The Office of Advocacy opines that our recommendation for five licensees in each market area and spectrum allocation blocks of 20 MHz in the 2 GHz band will allay FCC fears expressed in the NPRM. With five licensees, most market areas will have the two cellular competitors (one of which is the current LEC) and three companies unrelated to present local exchange or cellular

carriers.<sup>21</sup> The Office of Advocacy believes that this is sufficient competition to ensure both technological and price competition. Thus, the Office of Advocacy does not support any restriction on the eligibility of providers.<sup>22</sup>

#### D. Methods of Awarding Licenses

The Commission currently issues licenses for mobile communication services and operational-fixed microwave service through comparative hearings or by lottery. *Id.* at ¶ 82. The Commission requests comments on the best method for awarding PCS licenses. The FCC also requests comments on any procedures for awarding licenses through the auctioning of spectrum.<sup>23</sup>

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<sup>21</sup> To further assure competitive protection, the Commission may wish to require Tier 1 LECs, whether they own cellular service or not, to provide central office interconnection to PCS operators to the same degree provided to competitive access providers. Currently, that is limited to special access but should the Commission order such interconnection for switched access, the Office of Advocacy recommends that the interconnection requirement also apply to PCS.

<sup>22</sup> The endorsement of all available entrants does not apply if the Commission adopts rules limiting the number of PCS licensees in a market to three. It is then quite conceivable that insufficient competition would take place in the market to generate competitive prices or advances in technology. Under that circumstance, the Office of Advocacy would have no choice but to support restrictions on the entry of cellular and local exchange carriers into the PCS market. The only exception would be for those areas that otherwise would not be able to obtain PCS unless provided by a current cellular or local exchange carrier.

<sup>23</sup> When the Commission prepared the NPRM, Congress was considering legislation to authorize the auctioning of spectrum for PCS that currently is dedicated to use by the federal  
(continued...)



As the Commission notes, comparative hearings result in substantial transaction costs and significant time delays. For these reasons, the FCC tentatively concludes that comparative hearings are not suitable for the award of PCS licenses. The Office of Advocacy concurs in that finding.

The Commission proffers two options for conducting lotteries. First, the FCC could have a post-card lottery in which the winning applicant could be given a set period of time (the Commission suggests thirty days) to demonstrate that it meets all the qualifications required for licensure. *Id.* at ¶ 85. The other option would require that the lottery entry be accompanied by all information needed to prove the applicant's worthiness for the license. *Id.* The Commission tentatively decides that the first option is superior because it keeps costs low and proved to be of some success in the initial phases of the lotteries for cellular telephone service. *Id.* at ¶ 86.

The Office of Advocacy supports the use of lotteries. However, the Office of Advocacy is concerned that the development of lotteries could increase involvement by application mills. While we agree with the Commission that celerity is important,

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<sup>23</sup>(...continued)  
government. That bill died without action and the prospects for revival depend on a dramatically different political landscape. Therefore, the Office of Advocacy sees no reason to comment on a very speculative proposition.